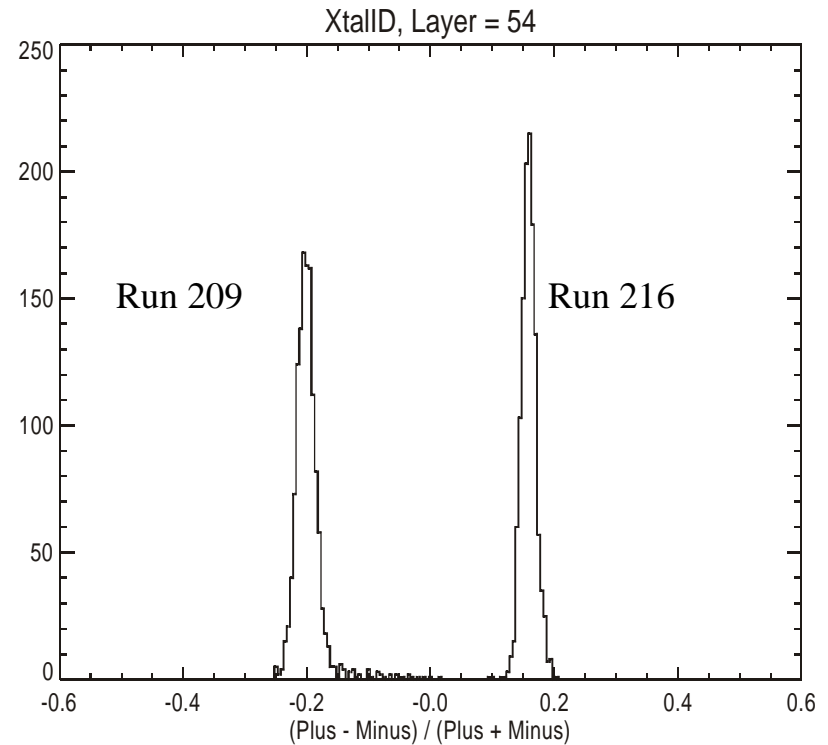


# Root is readable by IDL

- Heather created root2idl and associated library to read Root files directly with IDL.
- **It works!**
- Light asymmetry in one xtal for two runs.
- Slope is consistent with muon slope.

Here's the IDL proc that created the figure:

```
> get_intlin_coefs, intlin
>
> root2struct, rootfile='h:\glast\slac99\run209.root', cal=cal209, nevent=5000
> subtract_pedestal, cal209
> MeV209 = fC_to_MeV(adc_to_fC(cal209, intlin))
>
> root2struct, rootfile='i:\glast\run216.root', cal=cal216, nevent=5000
> subtract_pedestal, cal216
> MeV216 = fC_to_MeV(adc_to_fC(cal216, intlin))
>
> plot_rootratio, [MeV209, MeV216], hist, range=1, LLD=250, ULD=950,
/interactive
```

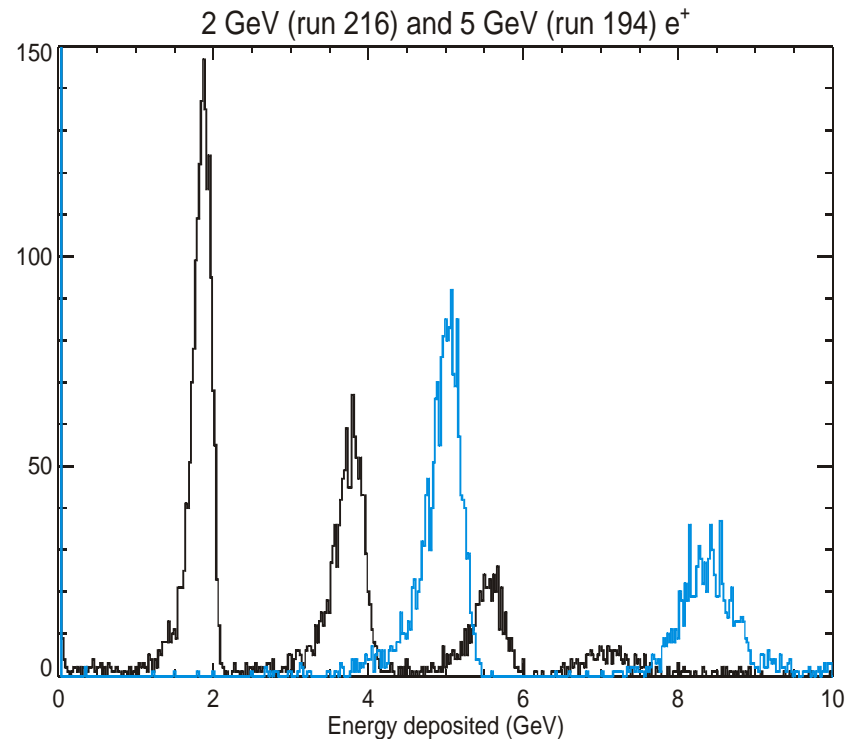


# Is my gain scale OK?

Check total deposited energy for **2 GeV** and **5 GeV** positron runs

- Both are dominated by LE (range 1).
- Used ADC\_to\_fC (intlin corrections) and fC\_to\_MeV (gain corrections, including optical contact).
- **Single-e+ peak** has mode near 5 GeV, so range 1 overall gain is too high.
- Note **double-e+ peak** is <10 GeV because many bars are saturating in range 1.

**Conclusion:** Allow for a single free parameter for total gain normalization, but use fC\_to\_MeV to get close and account for optical contact changes.



# Profile fitting

Profile fitting of 20 GeV e+ run.

- Used range 3 (HE). Again used ADC\_to\_fC (intlin corrections) and fC\_to\_MeV (gain corrections, including optical contact).
- Sum of bars in **black**
- **Profile fit in blue**
- Range 3 also appears to have gains set too high, so I'll continue to review corrections.

**Conclusion: Any analysis can be done in IDL as well!**

